Remark

The Applicant thanks the Examiner for his thorough search and careful consideration of the subject matter of the claims. The Applicant gratefully acknowledges the Examiner's indication that claims 11-13 would be allowable over the prior art of record if rewritten in independent form. However, at this time, the Applicant has elected to point out significant differences between the various embodiments of the present invention as recited by the claims and the combination of art relied upon by the Examiner.

The Applicant respectfully requests reconsideration of this application as amended. The Applicant proposes herein amendments to provide additional claims and to increase the clarity of the claims. Claim 1 has been amended without prejudice. No claims have been cancelled. Twenty-four new claims, claims 34 – 57, have been added. Therefore, claims 1 – 57 are now present for examination. Applicant respectfully submits that no new matter has been included by this amendment and that the new claims are fully supported by the disclosure as originally filed.

35 U.S.C. § 103 Rejection – Luskin

In the Office action, the Examiner rejected claims 1-3, 5-8, 10, 14-16, 18-21, 23-25, and 27-33 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,812,987 of Luskin et al. ("**Luskin**"). The Applicant respectfully disagrees with the Examiner's characterization of Luskin and points out significant distinctions between the claimed subject matter and the teachings of Luskin.

As understood by the undersigned, Luskin generally relates to a computerized asset allocation methodology for purposes of creating and managing what would today be referred to as a group of "lifestyle funds." Notably, what ***Luskin is advocating is a one-size-fits-all, simplified investment vehicle for investors having similar time horizons*** rather than an

individualized portfolio optimization approach as provided by various embodiments of the present invention. For example, Luskin appears to assume that all investors have a risk tolerance that diminishes in a predetermined manner as a function of the remaining length to horizon (see Col. 2, lines 39-47; and Col. 10, lines 50-62). Additionally, the end result of Luskin is the creation and/or periodic adjustment of one or more lifestyle funds by determining appropriate weightings of the strategic and tactical asset class mixes that make up the lifestyle funds (see Figure 8 – creation of the strategic asset class mix weights; Figure 9 – tactical investment strategy). Consequently, investment advice for an individual investor is neither proposed nor contemplated, rather Luskin describes a methodology to manage assets that are part of its lifestyle funds. Finally, while Luskin uses the terms like "portfolio optimization," "efficient frontier," and others that are used in the claims, it is important to understand that all of Luskin's asset management functions (e.g., optimization, adjustments, creating investor trade lists, determination of expected returns, etc.) are performed in the asset class domain. Importantly, asset classes are not financial products, but rather represent underlying categories of commercial assets or goods, such as bonds, stocks, money markets, currencies, cash, gold, silver, oil, gas, or other precious metals and minerals (see Col. 8, lines 13-16).

Turning now to the language expressly recited by claim 1, Luskin does not teach or reasonably suggest at least the following elements of claim 1:

- "generating return scenarios for each asset class of a plurality of asset classes based upon future scenarios of one or more economic factors"
- "creating a mapping from each financial product of an available set of financial products onto one or more assets classes of the plurality of asset classes by determining exposures of the available set of financial products to each asset class"
- "determining expected returns and volatility of returns for each of a plurality of portfolios [of financial products] on the efficient frontier based upon the mapping"
- "identifying a recommended portfolio [of financial products] …that maximizes an expected utility of wealth for a particular investor"

While Luskin does determine implied expected returns for each asset class using the Capital Asset Pricing Model, the undersigned objects to the Examiner equating this with generating return scenarios for asset classes based upon ***future scenarios of one or more economic factors*** as recited by claim 1. Example economic factors discussed in the specification include price inflation, short-term interest rates, and dividend growth (see page 16, lines 4-9). The undersigned can find nothing in the portion of Luskin relied upon by the Examiner to suggest that Luskin bases its determination of expected returns for asset classes on "future scenarios of one or more economic factors."

Luskin also fails to teach or suggest "***creating a mapping from each financial product*** of an available set of financial products ***onto one or more assets classes*** of the plurality of asset classes ***by determining exposures of the available set of financial products to each asset class***" (emphasis added). In fact, it appears to the undersigned, that Luskin suggests just the opposite as Luskin seeks to determine the appropriate mix of asset classes to be represented in a lifestyle fund that is being created or adjusted. An example of the mapping process recited by claim 1 is *returns-based style analysis* that was invented by Stanford professor and Nobel laureate William F. Sharpe (one of the co-inventors of the present invention). Sharpe's method is explained in detail in his landmark paper "Determining a Fund's Effective Asset Mix," Investment Management Review, (December 1988), pp. 59 – 69 (which is cited in the above-referenced patent application at page 19, lines 1-5). The purpose of returns-based style analysis is to determine a financial product's (e.g., a mutual fund's) *effective asset mix* (as opposed to actual asset mix) with respect to a set of asset classes. Consequently, it should now be understood that Luskin is composing a lifestyle fund based upon a desired asset class mix while the mapping process of claim 1 essentially decomposes a financial product to allow it to be characterized in terms of asset class exposures.

Luskin's next deficiency with respect to claim 1 relates to the recited element of "determining expected returns and volatility of returns for each of a plurality of portfolios [of financial products] on the efficient frontier based upon the mapping." At this point, it might be helpful to again summarize the differences between financial products and asset classes. Asset classes were defined above as categories of commercial assets or goods. Importantly, the term "financial product" in the above-referenced patent application generally refers to "a legal representation of the right (often denoted as a claim or ***security***) to provide or receive prospective future benefits under certain stated conditions" (emphasis added. See page 7, lines 6-8). Consequently, while a financial product might be said to have exposure to one of more different asset classes, a financial product is not an asset class and an asset class is not a financial product. As explained above, all of Luskin's asset management functions are performed in the asset class domain. Therefore, it should now be apparent that Luskin does not teach, suggest, or contemplate determining expected returns and volatility of returns for portfolios of financial products on the efficient frontier. Furthermore, Luskin does not and cannot teach determining such expected returns "based on the mapping" as it was illustrated above that Luskin lacks teaching or suggestion with respect to the recited mapping process.

Luskin also fails to teach or suggest "identifying a recommended portfolio [of financial products] ...that maximizes an expected utility of wealth for a particular investor." As was previously above, Luskin operates in the asset class domain. Therefore, Luskin cannot identify a recommended portfolio of financial products. Also discussed above is the fact that Luskin relates to a one-size-fits-all investment vehicle. Consequently, Luskin cannot be fairly characterized as teaching or suggesting "identifying a recommended portfolio ... that ***maximizes an expected utility of wealth for a particular investor***" (emphasis added). For at least these

reasons, claim 1 and its dependent claims that add further limitations are thought to be clearly distinguishable over Luskin.

35 U.S.C. § 103 Rejection – Luskin in view of Edesess

In the Office action, the Examiner rejected claims 4, 17, and 26 under 35 U.S.C. §103(a) as being unpatentable over Luskin in view of U.S. Patent No. 5,848,287 of Edesess ("**Edesess**"). The Examiner relies on Edesess solely for allegedly teaching that "mean-variance optimization is an old and well known alternative for portfolio optimization." There is no need to address the correctness of the Examiner's assertion as the truth or falsity has no bearing on Edesess' relevance to claim 1. The undersigned finds no teaching or suggestion in Edesess that addresses the deficiencies of Luskin and the Examiner has not identified such teaching or suggestion. Consequently, Edesess does not appear to provide the limitations of claim 1 in which Luskin has been shown to be deficient. For at least this reason, claim 1 and its dependent claims are thought to be distinguishable over the combination of Luskin and Edesess.

35 U.S.C. § 103 Rejection – Luskin in view of Adkins

In the Office action, the Examiner rejected claims 9, and 22 under 35 U.S.C. §103(a) as being unpatentable over Luskin in view of U.S. Patent No. 5,644,727 of Atkins ("**Atkins**"). The Examiner relies on Atkins solely for allegedly disclosing "a stochastic process as an improvement of optimizing … for the benefit of offering better solutions to investors." As above, there is no need to address the correctness of the Examiner's assertion as the truth or falsity has no bearing on Atkins' relevance to claim 1. The undersigned finds no teaching or suggestion in Atkins that addresses the deficiencies of Luskin and the Examiner has not identified such teaching or suggestion. Consequently, Atkins does not appear to provide the

limitations of claim 1 in which Luskin has been shown to be deficient. For at least this reason, claim 1 and its dependent claims are thought to be distinguishable over the combination of Luskin and Atkins.

New Claims

By this amendment, the Applicant proposes the addition of twenty-two new claims, claims 34-57. Each of the newly added independent claims are each thought to include one or more limitations that are similar to those discussed above with reference to claim 1. For example, the method of new independent claim 34 includes the following elements:

- "determining feasible exposures to a plurality of asset classes achievable by a particular investor by ***determining a combination of one or more asset classes and proportions thereof that characterize future performance of each financial product***"
- "***identifying a recommended efficient portfolio of financial products*** from the set of financial products by maximizing an expected utility of wealth for the particular investor …" (emphasis added).

New independent claim 44 includes the following elements:

- "identifying a relationship between returns of … a set of financial products … and returns of combinations of one or more factor asset classes … by ***performing an exposure analysis on each financial product***"
- "determining expected returns and volatility of returns for each of a plurality of efficient portfolios [of financial products] based upon the relationship"
- "***identifying a recommended portfolio*** [of financial products] … by selecting an efficient portfolio of the plurality of efficient portfolios ***that maximizes an expected utility of wealth for the particular investor***"

New independent claim 53 is intended to represent a "step-plus-function" version of claim 34.

New independent claim 55 is intended to represent a "step-plus-function" version of claim 44.

New independent claim 57 includes the following elements:

- "identifying a relationship between future returns of … a set of financial products … and future returns of combinations of one or more factor asset classes … by ***determining each financial product's effective asset mix with respect to the set of factor asset classes***;

- "determining expected returns and volatility of returns for each of a plurality of efficient portfolios [of financial products] based upon the relationship"
- "***identifying a recommended portfolio*** [of financial products] … by selecting an efficient portfolio of the plurality of efficient portfolios ***that maximizes an expected utility of wealth for the particular investor***"

As a result, arguments presented above with reference to claim 1 are thought to be equally applicable to the new independent claims. For at least this reason, claims 34-57 are thought to be allowable over the combination of reference relied upon by the Examiner.

Conclusion

Applicant respectfully submits that the rejections have been overcome by the amendment and remark, and that the pending claims are now in condition for allowance. Accordingly, Applicant respectfully requests that the rejections be withdrawn and that a Notice of Allowance be issued for claims 1 – 57.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 607-3633 if there remains any issue with allowance of the case.

Request for an Extension of Time

The Applicant respectfully petitions for a one-month extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. 1.136(a). Enclosed is a credit card form in the amount of $110.00 to cover the necessary fee under 37 C.F.R. 1.17(a). Please charge our Deposit Account No. 06-0029 for any additional charge associated with such an extension.

Respectfully submitted,
FAEGRE & BENSON LLP

Date: December 27, 2002

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MARKED VERSION SHOWING CHANGES

In the claims:

Presented below are the claims, as amended, with changes marked. Insertions are underlined, deletions are bracketed.

Please amend claim 1

Please add new claims 34-57

1. (Twice Amended) A method comprising:

generating return scenarios for each asset class of a plurality of asset classes based upon future scenarios of one or more economic factors;

creating a mapping from each financial product of an available set of financial products onto one or more asset classes of the plurality of asset classes by determining exposures of the available set of financial products to each asset class of the plurality of asset classes;

determining expected returns and volatility of returns for each of a plurality of portfolios on the efficient frontier based upon the mapping, each of the plurality of portfolios including combinations of financial products from the available set of financial products; <u>and</u>

identifying a recommended portfolio of the plurality of efficient portfolios that maximizes an expected utility of wealth for a particular investor.

34. – 57. (New)